

### **REMARKS**

This Amendment responds to the final Office Action dated February 18, 2010 and is being enclosed with a Request for Continued Examination submitted concurrently herewith. This Amendment represents a fully responsive submission, as required under 37 CFR § 1.114. Claims 1, 3, 5-13, 19, 34-42, and 55-57 are pending. Claims 9-13 and 36-42 are withdrawn. Claims 1, 3, 5, 6, and 19 have been amended. Claims 54 and 58 have been cancelled. In view of the following remarks, as well as the preceding amendments, Applicants respectfully submit that this application is in complete condition for allowance and request reconsideration of the application in this regard.

#### **Rejection under 35 U.S.C. § 112**

Claims 1, 3, 5-8, 19, 34, 35, and 54-58 stand rejected under 35 U.S.C. § 112, 1<sup>st</sup> paragraph. Applicants believe that the amendments to the claims overcome this rejection.

Claims 55-57 stand rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph. Claim 55 is correctly parsed that the device structure further comprises “a conductive layer disposed between said first source/drain contact of said first transistor and the substrate”, not the first and second transistors. Applicants request that the Examiner withdraw the rejection.

#### **Rejection under 35 U.S.C. § 102**

Claims 1, 3, 7, 8, 19, 35, and 54-58 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,933,222 to Dubin et al. (hereinafter *Dubin*). Of the rejected claims, claim 1 is the sole independent claim. Applicants respectfully traverse the rejection.

Claim 1, as amended, recites “a fill layer composed of a dielectric material and disposed between said second gate dielectric on said vertical sidewall of said second gate electrode separated from said first gate dielectric on said vertical sidewall of said first gate electrode”, “each of the first semiconducting carbon nanotubes is positioned in between said second gate dielectric on said vertical sidewall of said second gate electrode and said first gate dielectric on said vertical sidewall of said first gate electrode”, and “portions of the dielectric material of said fill layer are disposed between adjacent pairs of the plurality of first semiconducting carbon

nanotubes and between adjacent pairs of the plurality of second semiconducting carbon nanotubes". *Dubin* fails to disclose this claimed structural arrangement.

*Durbin* discloses transistors 24 with ring-shaped gate electrodes 202. A gate dielectric layer 215 is disposed on the sidewalls of each gate electrode 202. A fill layer 216 is disposed between the gate dielectric layers 215 on different gate electrodes 202. However, neither of the nanotubes 250 is disposed between the gate dielectric layers 215 disposed on the electrodes 202 of different transistors 24 and the fill layer 216 in *Dubin* does not fill spaces between the nanotubes 250 of one transistor 24 and the nanotubes 250 of the other transistor 24.

Consequently, when the *Graham* factual inquiries are considered, an unresolved difference exists between independent claim 1 and the *Dubin* that is sufficient to preclude a *prima facie* case of obviousness. For this reason, Applicants respectfully request that the Examiner withdraw the rejection of independent claim 1.

Because claims 3, 7, 8, 19, 35, and 55-57 depend from independent claim 1, Applicants submit that these claims are also patentable for at least the same reasons discussed above. Furthermore, each of these dependent claims recites a unique combination of elements not disclosed or suggested by *Dubin*.

#### Claims 5, 6, and 34 over *Dubin* and *Farnworth*

Claims 5, 6, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dubin* in view of *Farnworth* et al. (U.S. Patent No. 6,515,325), hereinafter *Farnworth*. *Farnworth* fails to remedy the deficiencies of *Dubin*. Because claims 5, 6, and 34 depend from independent claim 1, Applicants submit that these dependent claims are patentable for at least the same reasons. Furthermore, these dependent claims recite unique combinations of elements not disclosed or suggested by the combination of *Dubin* and *Farnworth*.

#### Conclusion

Applicants have made a bona fide effort to respond to each and every requirement set forth in the Office Action. In view of the foregoing remarks and amendments, this application is submitted to be in complete condition for allowance. Accordingly, a timely notice of allowance to this effect is earnestly solicited. In the event that any issues remain outstanding, the Examiner is invited to contact the undersigned to expedite issuance of this application.

Applicants do not believe any fees are due in connection with filing this communication other than a fee for an RCE. If, however, any additional fees are necessary as a result of this communication, the Commissioner is hereby authorized to charge any under-payment or fees associated with this communication or credit any over-payment to Deposit Account No. 23-3000.

May 17, 2010  
Date

2700 Carew Tower  
441 Vine Street  
Cincinnati, Ohio 45202  
Telephone: (513) 241-2324  
Facsimile: (513) 241-6234  
wallen@whepatent.com

Respectfully submitted,  
/William R. Allen/  
William R. Allen, Ph.D.  
Reg. No. 48,389  
WOOD, HERRON & EVANS, L.L.P.